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ABSTRACT

In 1966 an intensive 5-day workshop was held to assist professional staff in the Ohio Department of Education in gaining skills in educational research and evaluation procedures and techniques. The 32 participants were administrative, supervisory or consultative personnel, and the training was intended to help them to communicate with each other and with other educators in the Department. The program covered general research techniques (objectives and criteria, types of educational research, delimitation and definition of problems, statement of hypotheses, and problems of data collection); research methodology and design (types of research methods and designs, methods of data collection, and sampling plans); and evaluation techniques (nature and purpose of measurement, review of descriptive statistics, statistical inferences, and testing hypotheses). Follow-up meetings were held to apply the techniques learned in the workshop to current research problems facing the participants. The majority of the participants considered that the program met their expectations and was helpful to them. The document includes a detailed statement of research problems and hypotheses used in the workshop, as well as the program announcement, evaluation summary form, and registration form. (MBM)

ED040165

A PROGRAM OF TRAINING IN RESEARCH AND EVALUATION

STATE DEPARTMENT OF EDUCATION - OHIO

Grant No. OEG-3-6-068879-1799

Dr. Robert Beynon, Director

(Final Report Prepared by H. Eugene Wysong)

September 1, 1966 to June 30, 1967

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State of Ohio, Department of Education

Columbus, Ohio

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PROGRAM OF TRAINING IN RESEARCH AND EVALUATION TECHNIQUES FOR PROFESSIONAL STAFF IN THE OHIO DEPARTMENT OF EDUCATION

Orientation of Program

The training program was an intensive five-day workshop in research and evaluation training for professional staff members in the State Department of Education of Ohio. The workshop was conducted on the dates of September 26 through September 30, 1966 and was held at Holiday Inn, 175 East Town Street, Columbus, Ohio. Thirty-two professional staff members of the Ohio Department of Education participated in the activities of the training program. The participants included staff representatives from the Divisions of Guidance and Testing, Research, Elementary and Secondary Education, School Finance, Special Education, School Lunch Program, Teacher Education and Certification, and Vocational Education. Appendix A includes a chart which shows the organization of these Divisions in the Ohio State Department of Education.

The purpose of this training program was to assist professional staff members in the Ohio Department of Education to gain skills in educational research and evaluation procedures and techniques. Educational experiences were planned to improve the understandings and skills of state personnel who are in an administrative, supervisory, or consultative capacity. The research and evaluation training experiences were designed to help the staff members to communicate adequately among themselves and with other educators in the State of Ohio about research and evaluation problems.

Description of the Program

The training program included research and evaluation training experiences for personnel in the Ohio State Department of Education. The program emphasized ideas and techniques which could be related to practical problems which exist in Ohio at the state and local levels. Specialists in the areas of research and evaluation were employed as workshop staff for carrying out the learning experiences. The workshop was held on a full-time

basis during a one-week period. The following gives a general description of the program content and the duration of time applied to each topic:

Program	Duration
A. General Research Techniques	1.5 days
1. Objectives and criteria	
2. Types of educational research	
3. Delimitation and definition of problems	
4. Statement of hypotheses	
5. Problems of data collection	
B. Research Methodology and Design	2.0 days
1. Types of research methods and designs	
2. Methods for data collection	
3. Sampling plans	
C. Evaluation Techniques	1.5 days
1. Nature and purpose of measurement	
2. Review of descriptive statistics	
3. Statistical inferences	
4. Testing hypotheses	

The agenda for the training program is included in Appendix B.

In addition, follow-up meetings were held for the purpose of applying research and evaluation techniques to current research problems which were being faced by state staff. A research specialist met with the participants at various times throughout the year to help solve some of the research problems which existed at that particular time. These meetings provided help in solving some of the day-to-day research and evaluation problems of the participants. The sessions were scheduled to be held periodically during the 1966-1967 school year.

Individuals who participated as consultants on the workshop staff are:

Dr. William Rodgers, Director of Research
Saginaw City Schools, Michigan

Dr. Robert Chin, Professor of Psychology
Boston University

Dr. William Asher, Professor of Educational Research
Purdue University

Dr. Daniel Norton, Assistant Professor of Education
The Ohio State University

Dr. Ralph Van Dusseldorph, Associate Superintendent
State Department of Education, Iowa

Dr. Dale Prediger, Associate Professor of Education
University of Toledo

Evaluation of the Program

1. Program Factors

a. The purpose of the training program was to assist state personnel to gain skills in research and evaluation techniques so that they might more adequately communicate among themselves and with other educators in the State of Ohio about research and evaluation problems. This purpose of the program seemed to be very appropriate. However, in future training programs this purpose should be clarified further by the development of more specific objectives within this overall purpose. One of the participants in the training program prepared a list of terms which he identified as being used in the research and evaluation training program. He indicated that many of these terms were new to him and that the concepts involved have expanded his research awareness and communication skills. The following list of terms were identified as being covered in the discussion throughout the training program.

Kerlinger	Relationships in reality
Campbell and Stanley	variance

covariance

cost-benefit

antecedent-consequent

experimental research

latency sleeper

criterion variable

hypothesis

external validity

internal validity

post test control group design

treatment

parameter

random selection

random assignment

analytical and normative research

null hypothesis H_o

scientific hypothesis

alternate hypothesis

theoretical space

real world

operational definitions

model

sematic differential

assumptions

descriptive research

Ex post facto

field experiment

field survey

scientific survey

administrative survey

observation

follow-up

projective technique

content analysis

nominal scale

ordinal scale

internal scale

random sampling

systematic random sampling

stratified sampling

SE of P

uncorrelated variables

correlated variables

degrees of freedom

R O X O

t test

chi-square test

rank order correlation

phi correlation	method of reporting
multiple correlation	inferential statistics
Educational and Pshchological Measurement	descriptive statistics
	level of significance
product moment correlation	F test
Analysis of variance	Z test

b. The focus of the training program centered on the practical research problems which were being faced by the participants. Each individual in the training program identified a research problem for his study. Appendix C includes a rough draft of tentative statements of research problems and hypotheses which were developed by the participants at the beginning of the training program. These research problems served as a basis for applying the concepts presented in the general discussions.

c. Staff ratio and competencies were very adequate for the purposes of the training program. Each consultant participated for two days in the training program. Future training programs might obtain greater continuity by employing a set of consultants for the complete duration of the training program.

d. Only state personnel who were in an administrative, supervisory, or consultative capacity were included as trainees in the program. The size of the group was very adequate for the purpose of providing educational experiences. However, the number of available positions was not sufficient to meet the demand.

e. The length of the training program seemed to be appropriate for the purposes of the program. A longer training program would have created conflicts with the on-going work of the participants. Some of the participants expressed that the training program was very well organized but that additional small work-group opportunities might have been helpful. The scheduled evening sessions did not seem to be extremely fruitful. The facilities and services of the Holiday Inn were inadequate.

f. The amount of budget was adequate for meeting the purposes of the training program.

2. The following are samples of statements made by participants in the training program which might serve to indicate the major strengths of the training program. In answer to the question "What were the strong points (of the program)?" the following are some of the statements which were given:

"Excellent resource people"

"Very stimulating for generating new ideas."

"Writing our own problems"

"Excellent instructors; very meaningful material; well organized workshop"

"Good staff members"

"Solid information; good atmosphere; good handout materials; night sessions were valuable."

"The review of statistics; the work on definitions of a problem."

"Well presented - individual problems were well used to get our feet wet."

"Excellent staff for presentations"

"There were evidences of excellent practicality initiated in the presentation which appear to be relevant to the State Department staff."

3. The following are samples of statements made by participants in the training program which might serve to indicate the major weaknesses of the training program. In answer to the question "What were the weaknesses of the institute?" the following are some of the statements which were given:

"Some of the material was over my head"

"Evening meetings were not as helpful as they might have been"

"Drop the two evening sessions"

"Lack of time to study text"

"I believe a team of consultants for the entire five days might have been superior"

"Program failed to recognize the application of the computer to educational research."

"Some instructors were forced to omit pertinent materials due to the volume covered."

"Too much materials in too short a time"

"I think one of the lecturers should have been retained through the whole show to kind of tie together each of the presentations."

4. The participants in the training program were requested to make an overall evaluation of the program. The following is a summary of the responses made to five general questions:

   a. How did you feel about the institute?

      No Good 0 Mediocre 1 OK 1 Good 19 Excellent 8

   b. Were your expectations met? Yes 24 No 5

   c. Was your time well spent? Yes 27 No 2

   d. Was the subject matter appropriate for you?

      Very Appropriate 16 Fairly Appropriate 14

      Not Appropriate 0

   e. Has the institute program assisted you?

      Very Much 17 Some 11 Not At All 0

   Appendix D includes the Evaluation Summary form which was used to collect evaluative information from the workshop participants.

5. This report has no recommendations for the staff of the U. S. Office of Education concerning the policies, forms, and instructions, procedures or other matter. The U.S.O.E. staff members have been very helpful and patient in assisting this training program.

Program Reports

1. Publicity

The announcement of the training program opportunities were distributed to each Division Director in the Ohio State Department of Education. Each Director was requested to discuss the opportunities with his staff members. Each Division Director nominated one or more members from his staff to participate in the program. Appendix E includes a copy of the registration form used.

2. Application Summary

a. Approximate number of inquiries from prospective trainees 45

b. Number of completed applications received 45

c. Number of first rank applications 45

d. How many applicants were offered admission 36

3. Trainee Summary

a. Number of trainees initially accepted in program 36

Number of trainees enrolled at the beginning of program 32

Number of trainees who completed program . 32

b. Categorization of trainees

(1) Number of trainees who principally are elementary or secondary public school teachers 0

(2) Number of trainees who are principally local public school administrators or supervisors 0

(3) Number of trainees from State education groups 32

(4) Number of trainees from colleges or universities, junior colleges, research bureaus, etc. 0

4. Program Director's Attendance

a. What was the number of instructional days for the program? . . . . . 5 days

b. What was the percent of days the director was present? 100%

5. Financial Summary

		Budgeted	Expended
a.	Trainee Support		
	(1) Stipends	$ 1,080.00	$ 960.00
	(2) Dependency allowance	0	0
	(3) Travel	0	0
b.	Direct Costs		
	(1) Personnel	2,552.00	1,508.00
	(2) Supplies	314.00	192.93
	(3) Equipment	0	0
	(4) Travel	900.00	323.28
	(5) Other	310.00	287.64
c.	Indirect Costs	0	0
	TOTAL	$ 5,156.00	$3,271.85

APPENDIX A

ORGANIZATIONAL CHART OF THE STATE DEPARTMENT OF EDUCATION

STATE OF OHIO
BOARD OF EDUCATION

SUPERINTENDENT OF PUBLIC INSTRUCTION

ASSISTANT SUPERINTENDENT INSTRUCTION

- **DIVISION OF ELEMENTARY AND SECONDARY EDUCATION**
  - General Supervision
  - Special Areas Supervisors
  - NDEA, Title III
  - Secretarial Staff
- **DIVISION OF VOCATIONAL EDUCATION**
  - Research and Surveys
  - Disadvantaged Youth Programs
  - Work Study Programs and Construction
  - Agriculture
  - Business and Office
  - Distributive
  - Home Economics
  - Trade and Industrial
  - Veterans Training
  - Guidance Services
- **DIVISION OF TEACHER EDUCATION AND CERTIFICATION**
  - Certification
  - Teacher Education
- **DIVISION OF FEDERAL ASSISTANCE**
  - Title I, (P.L. 89-10)
  - Title IIB, (P.L. 88-422)
  - Title II, (P.L. 89-10)
  - Title III, (P.L. 89-10)
- **DIVISION OF SPECIAL EDUCATION**
  - Physically Handicapped Children
  - Slow Learning Children
  - Pupil Services and Gifted Children
- **DIVISION OF GUIDANCE AND TESTING**
  - Guidance Services
  - Testing Program Services
  - Ohio Testing Services
- **DIVISION OF INSTRUCTIONAL MATERIALS**
  - Field Services
  - Clerical and Accounting
  - Booking
  - Inspection and Shipping

ASSISTANT SUPERINTENDENT SCHOOL ADMINISTRATION

- **DIVISION OF SCHOOL FINANCE**
  - Foundation Program
  - Pupil Transportation
  - Field Services
- **DIVISION OF RESEARCH**
  - Systems Design and Data Processing
  - Special Studies
- **STATE SCHOOL FOR THE BLIND**
  - Instruction
  - Care and Subsistance
  - Operation and Maintenance
- **OHIO SCHOOL FOR THE DEAF**
  - Academic Department
  - Vocational Education
  - Housing and Care
  - Operation and Maintenance

ASSISTANT SUPERINTENDENT DEPARTMENT SERVICES

- **BUSINESS OFFICE**
  - Mailing and Duplicating
- **BUILDING SECTION**
  - Federal Programs
- **STATE AGENCY FOR PROPERTY UTILIZATION**
  - Real Property
  - Personal Property
  - Field Services
- **SCHOOL LUNCH PROGRAM**
  - Administration and Clerical
  - Audit and Review
  - Field Service
- **NEWS WRITER**
- **DEPARTMENT ATTORNEY**
- **BUREAU OF VOCATIONAL REHABILITATION**
  - Rehabilitation Section
  - Administration
  - Field Services
  - Program Development and Special Services
  - Disability Determination Section

APPENDIX B

PROGRAM ANNOUNCEMENT

Program Announcement

PROGRAM OF TRAINING IN RESEARCH AND EVALUATION TECHNIQUES FOR PROFESSIONAL STAFF IN THE OHIO DEPARTMENT OF EDUCATION

Purpose: The purpose of this training program is to assist professional staff members in the Ohio Department of Education to gain skills in educational research and evaluation procedures and techniques. State personnel who are in an administrative, supervisory, or consultative capacity and who are interested in the research and evaluation of educational programs will be given experiences to improve their understanding and skill.

Place: Holiday Inn, 175 East Town Street, Columbus, Ohio

Dates: September 26 through September 30, 1966

Agenda

Monday, September 26

9:00 a.m. - 4:00 p.m.

Topic: General Research Techniques

-Objectives and criteria
-Types of educational research
-Delimitation and definition of problems
-Statement of hypotheses
-Problems of data collection

Consultants: Dr. William Rodgers, Director of Research
Saginaw City Schools, Michigan

Dr. Robert Chin, Professor of Psychology
Boston University

7:00 p.m. - 8:30 p.m.

Informal Session with Consultants

Tuesday, September 27

9:00 a.m. - 12:00 Noon

Continuation of Monday's Topic and Consultants

1:00 p.m. - 4:00 p.m.

Topic: Research Methodology and Design

-Types of research methods and designs
-Methods for data collection
-Sampling plans

Consultants: Dr. William Asher
Professor of Educational Research
Purdue University

Dr. Daniel Norton
Assistant Professor of Education
The Ohio State University

Wednesday, September 28

9:00 a.m. - 4:00 p.m.

Continuation of Tuesday's Topic and Consultants

Thursday, September 29

9:00 a.m. - 12:00 Noon

Continuation of Wednesday's Topic and Consultants

1:00 p.m. - 4:00 p.m.

Topic: Evaluation Techniques

-Nature and purpose of measurement
-Review of descriptive statistics
-Statistical inferences
-Testing hypotheses

Consultants: Dr. Ralph Van Dusseldorph
Associate Superintendent
Iowa State Department of Education

Dr. Dale Prediger
Associate Professor of Education
University of Toledo

7:00 p.m. - 8:30 p.m.

Informal Session with Consultants

Friday, September 30

9:00 a.m. - 4:00 p.m.

Continuation of Thursday's Topic and Consultants

Co-Directors of Training Program
Robert P. Beynon
H. Eugene Wysong

HEW:fh
September 6, 1966

APPENDIX C

TENTATIVE STATEMENTS OF RESEARCH PROBLEMS AND HYPOTHESES

Rough Draft

For Discussion Purposes

TENTATIVE STATEMENTS OF RESEARCH PROBLEMS AND HYPOTHESES

Submitted by Work Groups in Training Program
on Research and Evaluation Techniques

1. Statement of the Problem

In transporting pupils to and from school (excluding all extra trips), does the annual cost per pupil transported and the annual cost per vehicle-mile for drivers' salaries, expendable supplies (gasoline, oil, grease, anti-freeze) maintenance (labor and parts), tires (new tires, tubes and rebuilds), decrease as the average number of pupils per vehicle-hour of operation increases.

Null Hypotheses

There is no relationship between the annual cost per pupil and annual cost per mile, as defined in the problem, and the average number of pupils per vehicle-hour of operation.

2. Problem

Development and evaluation of instructional units for teaching "Profit = Maximizing Principles" in Vocational Agriculture.

Objective of Study

a. To develop instructional units for the teaching of selected Profit-Maximizing Principles to secondary school students of vocational agriculture.

b. To measure the relative understanding of Profit-Maximizing Principles as a result of real programs.

c. To measure the significance of selected variable factors upon the understanding of Profit-Maximizing Principles.

d. To arrive at recommendations for the effective use of the Profit-Maximizing Principle units by teachers of vocational agriculture.

Hypotheses

a. There will be no significant difference in understanding of Profit-Maximizing Principles among pilot and control groups.

b. Past experiences of the students will have no significant difference in this understanding of Profit-Maximizing Principles.

c. The type of school environment and the experiences of the agricultural instructors will have no significant influence on students understanding of Profit-Maximizing Principles.

3. Problem

To justify the continuance and/or expansion of Vocational Education Programs at the high school level.

Hypotheses

Graduates of non-vocational high school programs are better prepared for "life" than are vocational graduates.

High school vocational graduates tend to stay in the occupation for which they have been trained.

High school vocational graduates are able to advance faster in the occupation for which trained than another non-vocational graduate in the same occupation.

4. Problem

Development and evaluation of instructional units for teaching "Profit = Maximizing Principles" in Vocational Agriculture.

Objectives of Study

a. To develop instructional units for the teaching of selected Profit-Maximizing Principles to secondary school students of vocational agriculture.

b. To measure the relative understanding of Profit-Maximizing Principles as a result of real programs.

c. To measure the significance of selected variable factors upon the understanding of Profit-Maximizing Principles.

d. To arrive at recommendations for the effective use of the Profit-Maximizing Principle units by teachers of vocational agriculture.

Hypotheses

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b. Past experiences of the students will have no significant difference in this understanding of Profit-Maximizing Principles.

c. The type of school environment and the experience of the agricultural instructors will have no significant influence on students understanding of Profit-Maximizing Principles.

5. Problem

To justify the continuance and/or expansion of Vocational Education Programs at the high school level.

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Graduates of non-vocational high school programs are better prepared for "life" than are vocational graduates.

High school vocational graduates tend to stay in the occupation for which they have been trained.

High school vocational graduates are able to advance faster in the occupation for which trained than another non-vocational graduate in the same occupation.

6. General Statement of the Problem

What are the results of individual counseling with secondary school students?

Hypotheses

a. There is no significant difference in the semantic difference for those students who have received individual counseling once every two weeks, and those who have not received regular counseling.

b. There is no significant difference in the semantic difference scores for those students who have received individual counseling once every two weeks from the different sized schools.

c. There is no significant difference in the interaction between the types of counseling and the size of the schools.

d. There is no significant difference between the pre-semantic difference test score and the post-semantic difference test score for all subjects.

e. There is no significant difference in the interaction between the pre-post semantic difference test score and the type of counseling.

f. There is no significant difference in the interaction between the pre-post semantic difference test scores and school size.

g. There is no significant difference in the interaction between the pre-post semantic difference test scores, the type of counseling and the size of school.

7. Problem

Will there be a difference in the drop out rate in the State of Ohio in the years 1960-1964 to 1965-1969? If there is a difference is this due to additional federal funds?

Null Hypotheses

There will be no difference in the drop out rate in the State of Ohio in the years 1960-1964 to 1965-1969.

Methods

Administrative survey to determine if a change has occurred.

If a change has occurred, a field study will be used to determine the cause of the change.

Definition

Drop out is used as defined by the State Department of Education.

Additional Research

What areas (S.M.S.A.) exhibit most change?

What federal programs show most change?

Is there a relation of the amount spent (per pupil) to the change?

8. Statement of Problem

Classroom teachers of Math and Physical Science have more alternative employment opportunities than teachers of English, Speech, and Languages. Alternative employment opportunities would specifically mean employment in non-secondary teaching fields.

Methodology

a. Random sample teachers of Math, Physical Science, English, Speech, and Languages in randomly selected school districts within the State.

b. As a measure of the drawing power of alternative employment opportunities we will use the length of stay in teaching.

c. More specifically we will examine the differences between the mean lengths of stay between the two groups using either an F-test or a T-test.

Hypotheses

a. Alternative hypotheses: Male teachers have the same length of stay as female teachers.

b. Alternative hypotheses: Teachers of English, Speech, and Languages have the same marital status as teachers of Math and Physical Science.

c. Alternative hypotheses: Teachers of English, Speech, and Languages have preparation (training) equal to teachers of Math and Physical Science.

9. Statement of Problem

Is there a large enough difference in mean performance in the OST Verbal Ability Test (Grade 4) between all participating. Roman Catholic Schools and all participating schools to warrant establishing separate norms for Roman Catholic Schools?

Hypothesis

There is a significant difference in mean performance on the OST Verbal Ability Test (Grade 4) between all participating Roman Catholic Schools and all the participating schools included in the state norm group.

Alternate Hypotheses

This difference is due to:

a. Mean class size

b. Mean years of training of teachers

c. Mean number of years of teaching experience

d. Mean salaries of the teachers

e. Mean expenditure per pupil per year

f. Mean expenditure for library materials per pupil

Data Collection

a. 1966 OST Verbal Ability scores available in data bank.

b. The data for alternate hypotheses will be collected in a questionnaire sent to the local administrators of the schools in question.

Procedures

a. Obtain random sample (100 students) of Roman Catholic fourth graders taking OST Verbal Ability Test.

b. Obtain random sample (500 students) of all fourth graders taking OST Verbal Ability Test.

c. Compute means and standard deviations for each group.

d. Test the significance of the differences between the two groups (t - test)

e. If significant, do a regression study of correlation between mean performance on OST Verbal Test and each of the six variables listed in Alternate Hypotheses (using Rho).

10. Statement of the Problem

Does enrollment in group guidance sessions improve the achievement of Fourth grade students who have been identified as underachievers?

H_{o1}

There is no significant difference in achievement growth between fourth grade underachievers who have been enrolled in a series of group guidance sessions as compared to those who have not been enrolled in such a program.

Operational Definition

a. Significant difference.

b. Underachievers (Four Grade student).

Students who scored one Grade Placement (GP) below the fourth grade level on the Iowa Test of Basic Skills (I.T.B.S.).

c. Group Guidance Sessions

A group of not more than 8 students meeting with a certificated counselor in two sessions a week, each session 45 minutes long.

11. Statement of the Problem

Of the appraisal techniques A, B, and C, which can I use to successfully predict reading achievement of the pre-school, early entrance age youngsters?

Null H_{o1}

There is no significant correlation between the scores of a group of early entrance age youngsters using technique "A" and final reading achievement (end of first grade, third grade, fifth grade) as measured by teacher evaluation and a standardized reading achievement test.

$\underline{Ho_2}$ & 3

Use the above null hypothesis as it is applied to technique "A" and apply them in the same way to technique "B" and "C".

$\underline{Ho_4}$

There is no significant difference between size of school and the prediction of reading success using the above name and techniques.

$\underline{Ho_5}$

There is no significant difference between teacher evaluation of final reading achievement and the evaluation of final reading achievement by a standardized reading test.

$\underline{Ho_6}$

There is no significant relationship between size of school and teacher evaluation of final reading achievement.

$\underline{Ho_7}$

There is no significant relationship between size of school and final reading achievement as measured by a standardized reading test.

Methods and Procedure

a. Use regression analysis.

b. Cross-validation of regression equations.

12. Statement of the Problem

Are there certain "cultural awareness" factors which affect achievement test scores of students?

Hypothesis

There is no significant correlation in the inference drawn from certain words and phrases on standardized achievement test "A", "B", and "C" by certain identifiable groups and the performance of that group on each test.

Ways of Collecting

Three achievement tests will be given at grades 3, 7, and 10 in suburban schools, inner city (cities over 200,000) schools, and rural schools. The errors made by each grade level in each type of school will be tabulated. The errors will be factored to discover types of learnings and concepts that are different in the three types of school systems.

13. Statement of the Problem

Can selected observations of behavior be used to predict the validity of scores on an achievement test?

Hypotheses

a. There is no significant correlation between the number of times an examinee puts his finger or his pencil in his mouth during an achievement test administration and his performance on that test.

b. There is no significant correlation between the number of times an examinee erases his answers during an achievement test and his performance on that test.

c. There is no significant correlation between the number of times a testee moves his chair back from his desk during an achievement test.

d. There is no significant correlation between the number of times an examinee scratches himself during a test administration and his performance on an achievement test.

e. There is no significant correlation between the number of times an examinee coughs or blows his nose during an achievement test and his performance on the test.

f. There is no significant correlation between the number of times a testee shifts in his seat during an achievement test and his performance on the test.

Ways of Collecting

A scientific survey will be conducted by taking pictures of classes during achievement tests administration.

Four judges will be used to view films and count the criteria indicated above exhibited by each student.

Student exhibiting four or more of the above criteria each five minutes (may be multiples of any one of the criterion or a combination of several of the criteria) will be compared with students who exhibited less than four of the above indicated behaviors per five minutes.

14. Statement of the Problem

To determine why teachers of subject matter "A" in the State of Ohio do not implement methodology based on relevant and reliable research in the teaching of subject matter "A".

Hypotheses

The lack of implementation of methodology based on relevant and reliable research findings, by teachers of subject matter "A" in the State of Ohio is the result of the lack of confidence of said teachers in researchers and research findings.

Alternative Hypotheses

The lack of implementation of methodology based on relevant and reliable research findings, by teachers of subject matter "A" in the State of Ohio, is the result of the:

a. Lack of administrative leadership and support.

b. Lack of awareness of the existence of relevant and reliable research in the area of subject matter "A".

c. Lack of peer support in the implementation of methodology based on relevant and reliable research in the area of subject matter "A".

d. Lack of parental support for change.

Collection of Data

a. Due to the availability of alternative hypotheses a Field Study approach will be utilized.

b. The Interview Technique utilizing available instruments will be employed. If none are available, instruments will be prepared and validated by the researchers.

c. The Stratified Technique of random sampling will be utilized.

15. Problem

What has been the effect of raising standards for the Provisional Administrative Certificate, which was revised as of January 1, 1964, upon the Elementary School Principal?

Hypotheses

a. Does the requirement of a Masters Degree for an Elementary School Principal provide increased competency in supervision of elementary teachers?

b. Will the increased competency in supervision, curriculum and administration result in more specific evaluation and appraisal methods with teachers?

c. Will the number of eight-year professional certificates for elementary teachers increase or decrease as a result of improved appraisal and evaluation methods?

d. Has the increased competency of elementary principals been reflected in the number of eight-year professional personnel principal's certificates issued?

e. Has the increased competency in the principal's appraisal and evaluation methods of elementary teachers improved due to the requirement of the principal meeting the provisions of the Standard Provisional Elementary Certificate?

Background

During the summer of 1966 approximately 280 certificated Ohio secondary school counselors were enrolled in two week seminars devoted to vocational guidance. The seminars were held at five universities and totaled fourteen in number with an enrollment of 15 to 20 counselors each. Participants, in addition to being certificated, were employed in systems having vocational education programs or in institutions designated as "feeder schools." The "feeder schools" were those secondary schools which supplied enrollees for vocational high schools or for joint vocational (area vocational) schools. Counselors employed in positions reimbursed under the Vocational Education Act of 1963 were urged to attend, if they had not done so in the summer of 1965, and were guaranteed admission to one of the fourteen seminars.

The fourteen seminars were financed by the Division of Vocational Education from funds available under the Vocational Act of 1963. The average cost per seminar was $5,700.00 for a total of approximately $80,000.00.

Questions

a. Do counselors who participated in the summer seminars report the experience as contributing to their professional competence?

b. Have counselors who participated in the summer seminars initiated new activities in their schools as a result of seminar experience?

c. What changes or modifications in activities do counselor participants report as a result of the summer seminar experience?

d. What, if any, additional training do counselor participants recommend?

e. What modifications, if any, need to be made in the seminar curriculum?

f. Is there enough evidence to support a continuation of the summer seminars in 1967?

Procedures

a. Construct a questionnaire containing about five open-ended questions.

b. Administer questionnaire to seminar participants.

c. Interview twenty-eight seminar participants who have been randomally selected.

d. Classify respondents and tally activities.

   (1) School setting (area vocational school, vocational school, comprehensive school, feeder school).

   (2) Counselor position (guidance director-administrator, counselor, vocational guidance counselor (reimbursed).

   (3) Seminar location.

   (4) Seminar date.

e. Classify and tally responses.

f. Analysis of responses by an analysis of variance.

16. General Purpose of Research

The purpose of the research is to develop and validate instruments which will differentiate between students and teachers who have achieved certain objectives of guidance and those students and teachers who have not achieved certain objectives of guidance.

Statement of the Problem

Is there a relationship between student and teacher scores on inventory items and their achievement of guidance objectives?

Null Hypotheses

a. Students who have been judged to be achieving certain objectives of a school guidance program will not score significantly higher on items in the Student Inventory for the Evaluation of Guidance than students who have been judged not to be achieving certain objectives of a school guidance program.

b. Teachers who have been judged to be achieving certain objectives of a school guidance program will not score significantly higher on items in the Teacher Inventory for the Evaluation of Guidance than teachers who have been judged not to be achieving certain objectives of a school guidance program.

Definitions and Methodology

a. Guidance Objectives for Students: The purpose of secondary school guidance programs is to assist students to:

(1) Select appropriate high school courses and activities.

(2) Select and enter into appropriate post high school educational activities.

(3) Develop effective learning skills and habits.

(4) Progress in an appropriate vocational career.

(5) Achieve the instructional goals of the school.

(6) Develop an adequate and satisfying self concept.

(7) Develop the abilities for being self directed.

b. Procedure for judging students who are achieving guidance objectives: Senior students in schools with comprehensive guidance programs will be categorized into five groups according to their most recent ability test scores. Each of two school counselors who are familiar with these students will identify a student from each category whom he judges to be achieving most adequately guidance "a". Then the counselor will select a student from each ability category whom he judges to be achieving least adequately guidance objective "a". This selection process continues until 25 per cent of the total student population has been selected for each guidance objective. Only those students who have been similarly judged by both counselors will be used.

Construction of Inventory

Procedure for developing inventory items which might be validated: The general objectives "a", "b" will be stated into the effective domain of the Taxonomy of Educational Objectives. Items to be validated will be written from this "Taxonomy of Guidance Objectives."

17. Title

A three year study of high school level slow learning students involving slow learners in special classes, employed dropout of slow learning classes, and slow learners in work study programs.

Problem

We do not know the effect of self concept on later adjustment toward employment for slow learning adolescents.

Groups

A - Slow learners in high school work study programs.

B - Slow learners in high school special education classes without work-study experience.

C - Slow learners and "drop outs" presently employed.

Criteria

All groups will consist of:

a. Non significant differences among

(1) sex ratio

(2) mean IQ

(3) socioeconomic status

(4) using Wamers Index

b. Age placement in slow learning class prior to or commencing with the junior high school special education program.

Statistical Analyses - Analysis of Variance

Treatments

a. Groups

A Self Concept	B Self Concept	C Self Concept
M	M	M

f =

t = A-B
A-C
B-C

b.

A Teacher Ratings	B Teacher Ratings
M	M

f =

t = A-B

C.

A Employer Ratings	C Employer Ratings
M	M

f =

t = A-C

Statement of Hypotheses

a. H_o: There is no significant differences among the three groups in self-concept at pretest, end year I, end year II, end year III.

b. H_o: There is no significant difference between teacher ratings of those slow learning adolescents in work study programs and those in slow learning classes without work study programs at end year I, end year II, end year III.

c. H_o: There is no significant difference between employer ratings of those slow learning adolescents in work study programs and slow learning class "drop outs" presently employed at pretest, end year I, end year II, end year III.

18. Problem

Is there a difference in the self-perception of homemaking competencies between high school graduates who completed two or more years of Vocational Home Economics courses and students who had not enrolled in Home Economics courses in high school? (9-12)

Hypotheses

There is a difference between self-perception related to homemaking competencies of high school graduates who have and have not completed Home Economics courses.

Questions Needing Answers

a. Management of Resources - Time, Money, Energy, Etc.

b. Child Rearing

c. Family Relationships

d. Feeding the Family

e. Consumer Decisions

f. Furnishing the Home

g. Clothing the Family

Data Collection

a. Subjects

(1) Experimental Group

High school graduates who have completed two or more years of Vocational Home Economics grades 9-12 and have been maintaining a home from 1 to 4 years.

(2) Controlled Group

High school graduates who did not enroll in any Vocational Home Economics classes 9-12 and have been maintaining a home 1 to 4 years.

b. Population Sample Procedure

High school Home Economics teachers with help from the administrative office identify the potential subjects in two groups. State staff will randomize selection of subjects from the potential list.

c. Instrumentation

Questionnaire administered in which subjects are able to indicate the degree of perceived competencies:

(1) Home responsibilities

(a) Management of resources

(b) Child rearing

(c) Family relationships

(d) Feeding the family

(e) Consumer decisions

(f) Furnishing the home

(g) Clothing the family

(h) Homemaking skills

(2) Gainful Employment

(a) Child care assistant

(b) Dietary aides

(c) Home and community services

(d) Food service

(e) Clothing Alteration

(f) Other employment

Operational Definition

To be defined.....

APPENDIX D

EVALUATION SUMMARY FORM

Evaluation Summary

Program of Training in Research and Evaluation Techniques
September 26 - 30, 1966

What did you think of the institute? Be Frank. Your comments will contribute a great deal toward future planning.

1. How did you feel about the institute?
   No Good___ Mediocre___ OK___ Good___ Excellent___

2. Were your expectations met? Yes____ No____

3. Was your time well spent? Yes____ No____

4. Was the subject matter appropriate for you?
   Very Appropriate_____ Fairly Appropriate_____
   Not Appropriate_____

5. Has the institute program assisted you?
   Very Much____ Some____ Not At All____

6. What were the weaknesses of the institute?

7. What were the strong points?

8. What improvements would you suggest?

****

Please rate the staff members - Rank your choice in order of the best (1) to the poorest (6).

	Rank	Who helped you most? (Check 3)	Who would you invite back? (Check 3)
Dr. Chin			
Dr. Rodgers			
Dr. Asher			
Dr. Norton			
Dr. Prediger			
Dr. Van Dusseldorph			

APPENDIX E

REGISTRATION FORM

Registration Form

PROGRAM OF TRAINING IN RESEARCH AND EVALUATION TECHNIQUES
FOR
PROFESSIONAL STAFF IN THE OHIO DEPARTMENT OF EDUCATION

Each staff person who is nominated by his or her division director to attend the Program of Research and Evaluation Techniques should complete this form.

Place: Holiday Inn, 175 East Town Street, Columbus, Ohio

Dates: September 26-30, 1966

Time: 9:00 a.m. - 4:00 p.m. Monday through Friday
7:00 p.m. - 8:30 p.m. Monday and Thursday

Each participant will be reimbursed $6.00 per diem to cover meal costs. Everyone is expected to be in attendance full time. See the program announcement for details of the program content.

Name of Participant_____

Title_____

Division_____

Participant_____ Date_____
(Signature)

Division Director_____ Date_____
(Signature)

Please send this form as soon as possible to:

Robert Beynon, Director
Division of Research
State Department of Education

HEW:fh
September 6, 1966